
REFERENCE

Mopper, K.; Johnson, L. Reversed-phase liquid chromatographic analysis of Dns-sugars. Optimization of derivatization and chromatographic procedures and applications to natural samples, *J. Chromatogr.*, **1983**, 256, 27–38.

SAMPLE

Matrix: urine

Sample preparation: 10 μ L Urine + 200 μ L reagent, heat at 65° for 16 h, cool to room temperature, inject a 5 μ L aliquot of the clear supernatant. (Prepare reagent by dissolving 5 mg Fmoc-hydrazine in 1 mL MeCN, add 10 μ L buffer. Buffer was 1.44 M formic acid containing 600 mM NaOH. Prepare Fmoc-hydrazine as follows. Dissolve 1 g 9-fluorenylmethyl chloroformate in 100 mL EtOH, add this solution dropwise with stirring to 10 mL hydrazine hydrate (Caution! Hydrazine hydrate is a carcinogen!), stir for 30 min, filter off the precipitate, wash it twice with 20 mL portions of ice-cold EtOH, dry at room temperature.)

HPLC VARIABLES

Guard column: 10 \times 4.6 3 μ m Spherisorb ODS II

Column: 125 \times 4.6 3 μ m Spherisorb ODS II

Mobile phase: Gradient. Isopropanol:isobutyl alcohol:water 6:6:88 for 13 min, to 80:0:20 (step gradient), maintain at 80:0:20 for 6 min, re-equilibrate at initial conditions.

Column temperature: 50

Injection volume: 5

Detector: F ex 270 em 315

CHROMATOGRAM

Retention time: 9.8

Limit of detection: 20 nM

OTHER SUBSTANCES

Extracted: lactulose, 3-O-methyl-D-glucose, rhamnose

KEY WORDS

derivatization

REFERENCE

Rooyakkers, D.R.; van Eijk, H.M.H.; Deutz, N.E.P. Simple and sensitive multi-sugar-probe gut permeability test by high-performance liquid chromatography with fluorescence labelling, *J. Chromatogr. A*, **1996**, 730, 99–105.

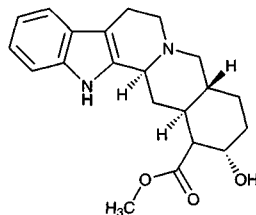
Yohimbine

Molecular formula: C₂₁H₂₆N₂O₃

Molecular weight: 354.45

CAS Registry No.: 146-48-5

Merck Index: 10236

**SAMPLE**

Matrix: blood

Sample preparation: 2 mL Whole blood or plasma + 2 mL buffer + 5 mL chloroform:isopropanol: n-heptane 60:14:26, shake gently horizontally for 10 min, centrifuge at 2800 g for 10 min. Remove the lower organic layer and evaporate it to dryness under vacuum at 45°, reconstitute the residue in 100 μ L mobile phase, centrifuge at 2800 g for 5 min, inject a 50 μ L aliquot of the supernatant. (Buffer was saturated ammonium chloride solution 25% diluted with water, adjusted to pH 9.5 with 25% ammonia solution.)

HPLC VARIABLES

Column: 300 \times 3.9 4 μ m NovaPack C18

Mobile phase: MeOH:THF:buffer 65:5:30 (Buffer was 0.68 g/L (10 mM (sic)) KH_2PO_4 adjusted to pH 2.6 with concentrated orthophosphoric acid.) (At the end of each session wash the column with water for 1 h and MeOH for 1 h, re-equilibrate for 30 min.)

Column temperature: 30

Flow rate: 0.8

Injection volume: 50

Detector: UV 272

CHROMATOGRAM

Retention time: 4.40

Limit of detection: <120 ng/mL

KEY WORDS

whole blood; plasma; interferences may occur—compounds (all of which are extracted) elute in this order tenoxicam; iproniazid; methocarbamol; methotrexate; caffeine; nialamide; colchicine; cytarabine; benzoylecgonine; acetaminophen; diazoxide; dacarbazine; sulfapyrazole; flumazenil; sulpride; morphine; atenolol; tolaxatone; terbutaline; albuterol; phenobarbital; ranitidine; tiapride; phenol; chlormezanone; aspirin; metformin; ritodrine; codeine; sultopride; amisulpride; naltrexone; lisinopril; benzocaine; nizatidine; nalorphine; mephedrine; naloxone; sotalol; carteolol; procainamide; carbamazepine; bromazepam; nalbuphine; nadolol; procabazine; dihydralazine; omeprazole; strychnine; acebutolol; glutethimide; chlorpropamide; glipizide; triazolam; prazosin; flunitrazepam; clonazepam; metoclopramide; melphalan; estazolam; tolbutamide; ephedrine; clonidine; pindolol; clobazam; minoxidil; disopyramide; nitrazepam; dextromethorphan; tofisopam; zopiclone; debrisoquine; sulindac; alprazolam; cycloguanil; lorazepam; methaqualone; ketamine; piroxicam; metoprolol; nifedipine; quinine; mephentermine; prilocaine; pentazocine; oxazepam; tiaprofenic acid; quinidine; celiprolol; ajmaline; yohimbine; lidocaine; secobarbital; viloxazine; mepivacaine; meperidine; doxylamine; labetalol; temazepam; amodiaquine; benperidol; droperidol; hydroxychloroquine; zolpidem; ketoprofen; alminoprofen; cicletanine; moclobemide; chloroquine; cocaine; timolol; nomifensine; ticlopidine; acenocumarol; vandesine; mexiletine; dipyrindamole; trazodone; pipamperone; pyrimethamine; benazepril; vincristine; metapramine; chlordiaepoxide; oxprenolol; warfarin; clorazepate; flecainide; phenacyclidine; thiopental; fenfluramine; metipranolol; triprolidine; naproxen; buprenorphine; verapamil; buspirone; tianeptine; midazolam; bupivacaine; carbinoxamine; loprazolam; cetirizine; chlorpheniramine; moperone; cibenzoline; medifoxamine; astemizole; vinblastine; nicardipine; bisoprolol; diltiazem; glibornuride; reserpine; aconitine; nitrendipine; diazepam; mianserin; ramipril; haloperidol; tetracaine; alprenolol; aceprometazine; glibenclamide; chlorophenacinone; doxepin; nimodipine; diphenhydramine; cyclizine; histapyrrodine; phenylbutazone; demexiptiline; clozapine; proguanil; trifluoperidol; medazepam; cyamemazine; bumadizone; suriclone; propranolol; acepromazine; hydroxyzine; niflumic acid; penbutolol; fluvoxamine; pimozide; daunorubicin; indomethacin; maprotiline; tropatenine; etodolac; fluoxetine; amitriptyline; nortriptyline; tiocloamarol; diclofenac; mefloquine; trimipramine; chlorambucil; lidoflazine; ibuprofen; floctafenine; alpidem; loratadine; chlorpromazine; clomipramine; carpi-pramine; thioridazine; fentiazac; clemastine; mefenamic acid; fluphenazine; prochlorperazine; penfluridol; bepridil; terfenadine; trifluoperazine

REFERENCE

Tracqui, A.; Kintz, P.; Mangin, P. Systematic toxicological analysis using HPLC/DAD, *J. Forensic Sci.*, **1995**, *40*, 254–262.

SAMPLE

Matrix: blood, tissue

Sample preparation: Serum. 200–450 μL Serum + 800 μL 1 M pH 9.2 Delory King carbonate buffer, vortex, add 5 mL diethyl ether, mix for 30 s, centrifuge at 1000 g for 2 min. Remove the organic phase and add it to 100 μL 100 mM HCl, mix for 30 s, centrifuge at 1000 g for 2 min, discard the ether, volatilize residual ether from the aqueous phase under a stream of nitrogen, inject a 10–70 μL of the aqueous phase. Liver. Homogenize 1 g of liver in 3 mL ice cold 1 M pH 9.2 Delory King carbonate buffer, add 5 mL diethyl ether, mix for 30 s, centrifuge at 1000 g for 2 min. Remove the organic phase and add it to 100 μL 100 mM HCl, mix for 30 s, centrifuge at 1000 g for 2 min, discard the ether, volatilize residual ether from the aqueous phase under a stream of nitrogen, inject a 10–70 μL of the aqueous phase.

HPLC VARIABLES

Column: 100 × 3.2 3 µm Phase-2 ODS

Mobile phase: MeCN:15 mM pH 3.0 monochloroacetate buffer 25:75 containing 350 mg/L EDTA

Flow rate: 0.6

Injection volume: 10-70

Detector: E, Bioanalytical Systems LC-4B, LC-17 oxidative flow cell, TL-5 glassy carbon electrode + 900 mV, Ag/AgCl reference electrode

CHROMATOGRAM

Retention time: 3.0

Internal standard: yohimbine

OTHER SUBSTANCES

Extracted: phentolamine

KEY WORDS

yohimbine is IS; serum; liver; mouse

REFERENCE

Kerger,B.D.; James,R.C.; Roberts,S.M. An assay for phentolamine using high performance liquid chromatography with electrochemical detection, *Anal.Biochem.*, **1988**, 170, 145-151.

SAMPLE

Matrix: blood, urine

Sample preparation: 2 mL Plasma or 500 µL urine + 100 µL 5 µg/mL eserine chlorohydrate + 0.25 (urine) or 1 (plasma) mL 500 mM pH 11 Na₂HPO₄ + 2 mL chloroform, shake for 5 min, centrifuge at 5000 g for 5 min. Remove 1.5 mL of the organic layer and evaporate it to dryness under a stream of nitrogen at 40°, reconstitute the residue in 100 µL MeOH:EtOH 85:15, inject an 80 µL aliquot.

HPLC VARIABLES

Column: 250 × 4 7 µm LiChrosorb Si 60

Mobile phase: MeOH:20 mM pH 5 sodium acetate 95:5

Column temperature: 30

Flow rate: 1

Injection volume: 80

Detector: F ex 280 em 320 (cell temp 15°) or UV 280

CHROMATOGRAM

Retention time: 7

Internal standard: eserine chlorohydrate (17)

Limit of detection: 0.1 ng/mL

OTHER SUBSTANCES

Extracted: metabolites

KEY WORDS

plasma; pharmacokinetics

REFERENCE

Le Verge,R.; Le Corre,P.; Chevanne,F.; Doe De Maindreville,M.; Royer,D.; Levy,J. Determination of yohimbine and its two hydroxylated metabolites in humans by high-performance liquid chromatography and mass spectral analysis, *J.Chromatogr.*, **1992**, 574, 283-292.

SAMPLE

Matrix: blood, urine

Sample preparation: Add 1 mL whole blood or urine to Toxi-Tube A (Toxi-Lab, Irvine CA), add 3 mL water, mix by gentle inversion for 5 min, centrifuge at 1500 g for 5 min. Remove the organic layer and evaporate it to dryness under a stream of nitrogen at 40°, reconstitute the residue with 50 µL MeCN:water 50:50, vortex for 10 s, centrifuge at 7500 g for 2 min, inject a 10 (urine) or 30 (blood) µL aliquot. (The detector wavelength shown is the wavelength of

maximum absorbance. This will not necessarily be the optimal wavelength for the separation. Multiple wavelengths from 200-350 nm can be scanned using a diode-array detector. Otherwise, 220 nm may be a reasonable choice for initial work. Matrix may interfere.)

HPLC VARIABLES

Guard column: 20 mm long Symmetry C18

Column: 250 × 4.6 5 µm Symmetry C8 (Waters)

Mobile phase: Gradient. A was 50 mM pH 3.8 sodium phosphate buffer. B was MeCN. A:B 85:15 for 6.5 min, 65:35 for 18.5 min, 20:80 for 3 min (step gradient), re-equilibrate at initial conditions for 7 min.

Column temperature: 30

Flow rate: 1 for 6.5 min, to 1.5 over 18.5 min, maintain at 1.5 for 3 min (re-equilibrate at 1.5 mL/min)

Injection volume: 10-30

Detector: UV 220.5

CHROMATOGRAM

Retention time: 11.51

KEY WORDS

whole blood

REFERENCE

Gaillard, Y.; Pépin, G. Use of high-performance liquid chromatography with photodiode-array UV detection for the creation of a 600-compound library. Application to forensic toxicology, *J. Chromatogr. A*, **1997**, 763, 149-163.

SAMPLE

Matrix: cell cultures

Sample preparation: Extract 5 g cell culture with 20 mL MeOH with sonication for 10 min, repeat extraction twice. Evaporate extracts to dryness under reduced pressure, reconstitute in 100 mL 10 mM HCl, filter, adjust pH to 6 with 10 mM NaOH, inject a 5-100 µL aliquot.

HPLC VARIABLES

Column: 250 × 4 10 µm Armsorb-300-C8 (Armchrom, Yerevan, Armenia)

Mobile phase: Gradient. A was MeCN:water 10:90 containing 0.1% trifluoroacetic acid. B was 0.1% trifluoroacetic acid in MeCN. A:B from 100:0 to 50:50 over 50 min.

Flow rate: 0.8

Injection volume: 5-100

Detector: UV 280

CHROMATOGRAM

Retention time: 21

OTHER SUBSTANCES

Extracted: ajmaline, ajmalicine, reserpine, raucaffricine, serpentine

REFERENCE

Klyushnichenko, V.E.; Yakimov, S.A.; Tuzova, T.P.; Syagailo, Y.V.; Kuzovkina, I.N.; Wulfson, A.N.; Miroshnikov, A.I. Determination of indole alkaloids from *R. serpentina* and *R. vomitoria* by high-performance liquid chromatography and high-performance thin-layer chromatography, *J. Chromatogr. A*, **1995**, 704, 357-362.

SAMPLE

Matrix: plants

Sample preparation: Freeze leaves with liquid nitrogen, air dry, grind to a fine powder. Mix 0.5 g powder and 2 mL MeOH, sonicate for 30 min, allow to settle, decant the liquid, repeat extraction. Combine the extracts and filter (0.45 µm) them, inject a 10 µL aliquot of the filtrate.

HPLC VARIABLES

Column: 100 × 4.6 3 µm Microsorb C18

Mobile phase: Gradient. MeCN:buffer 15:85 for 2 min, to 40:60 over 58 min, maintain at 40:60 for 5 min, to 95:5 over 5 min, maintain at 95:5 over 5 min. (Prepare buffer by mixing 2 mL trifluoroacetic acid and 1 mL triethylamine in water, make up to 1 L with water, adjust pH to 2.4 with ammonium hydroxide.)

Injection volume: 10

Detector: UV 274

CHROMATOGRAM

Retention time: 16.25

OTHER SUBSTANCES

Extracted: tetrahydroalstonine, tryptamine, vinblastine, vincamine, vincristine

Interfering: ajmalacine

KEY WORDS

leaves

REFERENCE

Bowman,R.N.; Gerber,R.E.; Terry,M.E. Analysis of anti-cancer alkaloids vincristine & vinblastine, *Rainin Chromatography Update (TB-13)*, **1996**, 1-2.

SAMPLE

Matrix: solutions

HPLC VARIABLES

Column: 150 × 4.6 10 µm PRP-1 (Hamilton)

Mobile phase: Gradient. MeCN:20 mM ammonium hydroxide from 15:85 to 100:0 over 17 min

Flow rate: 1

Detector: UV 220

CHROMATOGRAM

Retention time: 7

OTHER SUBSTANCES

Simultaneous: cocaine, codeine, methadone, reserpine, thebaine

REFERENCE

Keystone Scientific Catalog, 1993-4, p. 22.

SAMPLE

Matrix: solutions

Sample preparation: Prepare a solution in MeOH, inject a 1-25 µL aliquot.

HPLC VARIABLES

Column: 250 × 4.5 Zorbax cyanopropyl

Mobile phase: MeCN:500 mM acetic acid:t-butylamine 30:70:0.01

Flow rate: 2.5

Injection volume: 1-25

Detector: UV 254

CHROMATOGRAM

Retention time: 2.5

OTHER SUBSTANCES

Simultaneous: aspidospermine, quebrachamine

REFERENCE

Deutsch,H.F.; Evenson,M.A.; Drescher,P.; Sparwasser,C.; Madsen,P.O., Isolation and biological activity of aspidospermine and quebrachamine from an *Aspidosperma* tree source, *J.Pharm.Biomed.Anal.*, **1994**, 12, 1283-1287.

SAMPLE**Matrix:** solutions**HPLC VARIABLES****Column:** 250 × 4.6 Zorbax RX**Mobile phase:** Gradient. A was 10 mL concentrated orthophosphoric acid and 7 mL triethylamine in 1 L water. B was 10 mL concentrated orthophosphoric acid and 7 mL triethylamine in 200 mL water, make up to 1 L with MeCN. A:B from 100:0 to 0:100 over 30 min, maintain at 0:100 for 5 min.**Column temperature:** 30**Flow rate:** 2**Detector:** UV 210**OTHER SUBSTANCES**

Also analyzed: acepromazine, acetaminophen, acetophenazine, albuterol, aminophylline, amitrityline, amobarbital, amoxapine, amphetamine, amylocaine, antipyrine, aprobarbital, aspirin, atenolol, atropine, avermectin, barbital, benzocaine, benzoic acid, benzotropine, benzphetamine, berberine, bibucaine, bromazepam, brompheniramine, buprenorphine, buspirone, butabarbital, butacaine, butethal, caffeine, carbamazepine, carbromal, chloramphenicol, chlor-diazepoxide, chloroquine, chlorothiazide, chloroxylenol, chlorphenesin, chlorpheniramine, chlorpromazine, chlorpropamide, chlortetracycline, cimetidine, cinchonidine, cinchonine, clenbuterol, clonazepam, clonixin, clorazepate, cocaine, codeine, colchicine, cortisone, coumarin, cyclazocine, cyclobenzaprine, cyclothiazide, cyheptamide, cymarin, danazol, danthron, dapsone, debrisoquine, desipramine, dexamethasone, dextromethorphan, dextropropoxyphene, diamorphine, diazepam, diclofenac, diethylpropion, diethylstilbestrol, diflunisal, digitoxin, digoxin, diltiazem, diphenhydramine, diphenoxylate, diprenorphine, dipyrone, disulfiram, dopamine, doxapram, doxepin, dronabinol, ephedrine, epinephrine, epinine, estradiol, estriol, estrone, ethacrynic acid, ethosuximide, etonitazene, etorphine, eugenol, famotidine, fenbendazole, fen-camfamine, fenoprofen, fenproporex, fentanyl, flubendazole, flufenamic acid, flunitrazepam, 5-fluorouracil, fluoxymesterone, fluphenazine, furosemide, gentisic acid, gitoxigenin, glipizide, glunixin, glutethimide, glybenclamide, guaicol, halazepam, haloperidol, hydrochlorothiazide, hydrocodone, hydrocortisone, hydromorphone, hydroxyquinoline, ibogaine, ibuprofen, imino-stilbene, imipramine, indomethacin, isocarboxystyryl, isocarboxazid, isoniazid, isoproterenol, isox-suprine, ivermectin, ketamine, ketoprofen, kynurenic acid, levorphanol, lidocaine, lorazepam, lormetazepam, loxapine, mazindol, mebendazole, meclizine, meclofenamic acid, medazepam, mefenamic acid, megestrol, mepacrine, meperidine, mephermine, mephentermine, mephénytoin, mephesin, mephobarbital, mepivacaine, mescaline, mesoridazine, methadone, methamphetamine, meth-apyrilene, methaqualone, methazolamide, methocarbamol, methoxamine, methsuximide, methyl salicylate, methylodopa, methylodopamine, methylphenidate, methylprednisolone, methyltestosterone, methypyrrol, metoprolol, miboleron, morphine, nadolol, nalorphine, naloxone, naltrexone, naphazoline, naproxen, nefopam, niacinamide, nicotine, niacin, nifedipine, niflumic acid, nitrazepam, norepinephrine, nortriptyline, noscapine, nylidrin, oxazepam, oxycodone, oxymorphone, oxyphenbutazone, oxytetracycline, papaverine, pargyline, pemoline, pentazocine, pentobarbital, persantine, phenacetin, phenazocine, phenazopyridine, phencyclidine, phendi-metrazine, phenelzine, pheniramine, phenobarbital, phenothiazine, phensuximide, phenter-mine, phenylbutazone, phenylephrine, phenylpropanolamine, piperocaine, prazepam, predni-solone, primidone, probenecid, progesterone, propiomazine, propranolol, propylparaben, pseudoephedrine, puromycin, pyrilamine, pyrihydione, quazepam, quinaldic acid, quinidine, quinine, ranitidine, recinnamine, reserpine, resorcinol, saccharin, albuterol, salicylamide, salicylic acid, scopolamine, scopoletin, secobarbital, strychnine, sulfacetamide, sulfadiazine, sul-fadimethoxine, sulfaethidol, sulfamerazine, sulfamethazine, sulfamethoxazole, sulfanilamide, sulfapyridine, sulfasoxazole, sulindac, tamoxifen, temazepam, testosterone, tetracaine, tetra-cycline, tetramisole, thebaine, theobromine, theophylline, thiabendazole, thiamine, thiamylal, thiobarbituric acid, thioridazine, thiosalicylic acid, thiothixene, thymol, tolazamide, tolazoline, tobutamide, tolmetin, tranlycypromine, triamcinolone, tribenzylamine, trichloromethiazide, trifluoperazine, trihexyphenidyl, trimethoprim, tripeleminamine, triprolidine, tropacocaine, ty-ramine, verapamil, vincamine, zoxazolamine

REFERENCE

Hill, D.W.; Kind, A.J. Reversed-phase solvent gradient HPLC retention indexes of drugs, *J. Anal. Toxicol.*, **1994**, *18*, 233–242.

SAMPLE**Matrix:** solutions

HPLC VARIABLES

Column: 250 × 4.6 5 µm Supelcosil LC-DP (A) or 250 × 4.5 µm LiChrospher 100 RP-8 (B)

Mobile phase: MeCN:0.025% phosphoric acid:buffer 25:10:5 (A) or 60:25:15 (B) (Buffer was 9 mL concentrated phosphoric acid and 10 mL triethylamine in 900 mL water, adjust pH to 3.4 with dilute phosphoric acid, make up to 1 L.)

Flow rate: 0.6

Injection volume: 25

Detector: UV 229

CHROMATOGRAM

Retention time: 8.15 (A), 4.37 (B)

OTHER SUBSTANCES

Also analyzed: acebutolol, acepromazine, acetaminophen, acetazolamide, acetophenazine, albuterol, alprazolam, amitriptyline, amobarbital, amoxapine, antipyrine, atenolol, atropine, azatadine, baclofen, benzocaine, bromocriptine, brompheniramine, brotizolam, bupivacaine, buspirone, butabarbital, butalbital, caffeine, carbamazepine, cetirizine, chlorcyclizine, chlordiazepoxide, chlormezanone, chloroquine, chlorpheniramine, chlorpromazine, chlorpropamide, chlorprothixene, chlorthalidone, chlorzoxazone, cimetidine, cisapride, clomipramine, clonazepam, clonidine, clozapine, cocaine, codeine, colchicine, cyclizine, cyclobenzaprine, dantrolene, desipramine, diazepam, diclofenac, diflunisal, diltiazem, diphenhydramine, diphenidol, diphenoxylate, dipyrindamole, disopyramide, dobutamine, doxapram, doxepin, droperidol, encainide, ethidium bromide, ethopropazine, fenoprofen, fentanyl, flavoxate, fluoxetine, fluphenazine, flurazepam, flurbiprofen, fluvoxamine, furosemide, glutethimide, glyburide, guaifenesin, haloperidol, homatropine, hydralazine, hydrochlorothiazide, hydrocodone, hydromorphone, hydroxychloroquine, hydroxyzine, ibuprofen, imipramine, indomethacin, ketoconazole, ketoprofen, ketorolac, labetalol, levorphanol, lidocaine, loratadine, lorazepam, lovastatin, loxapine, mazinol, mefenamic acid, meperidine, mephénytoin, mepivacaine, mesoridazine, metaproterenol, metformin, methadone, methdilazine, methocarbamol, methotrexate, methotrimeprazine, methoxamine, methyl dopa, methylphenidate, metoclopramide, metolazone, metoprolol, metronidazole, midazolam, moclobemide, morphine, nadolol, nalbuphine, naloxone, naphazoline, naproxen, nifedipine, nizatidine, norepinephrine, nortriptyline, oxazepam, oxycodone, oxymetazoline, paroxetine, pemoline, pentazocine, pentobarbital, pentoxifylline, perphenazine, pheniramine, phenobarbital, phenol, phenolphthalein, phentolamine, phenylbutazone, phenyltoloxamine, phenytoin, pimozide, pindolol, piroxicam, pramoxine, prazepam, prazosin, probenecid, procainamide, procaine, prochlorperazine, procyclidine, promazine, promethazine, propafenone, propantheline, propiomazine, propofol, propranolol, protriptyline, quazepam, quinidine, quinine, racemethorphan, ranitidine, remoxipride, risperidone, salicylic acid, scopolamine, secobarbital, sertraline, sotalol, spironolactone, sulfapyrazone, sulindac, temazepam, terbutaline, terfenadine, tetracaine, theophylline, thiethylperazine, thiopental, thioridazine, thiothixene, timolol, tocainide, tolbutamide, tolmetin, trazodone, triamterene, triazolam, trifluoperazine, trifluoromazine, trimeprazine, trimethoprim, trimipramine, verapamil, warfarin, xylometazoline, zopiclone

KEY WORDS

details of plasma extraction

REFERENCE

Koves, E.M. Use of high-performance liquid chromatography-diode array detection in forensic toxicology, *J.Chromatogr.A*, **1995**, 692, 103-119.

Zafirlukast

Molecular formula: C₃₁H₃₃N₃O₆S

Molecular weight: 575.69

CAS Registry No.: 107753-78-6

Merck Index: 10241

